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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,328	05/15/2006	Stephane Revol	290905US6X PCT	2136
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER MALEKZADEH, SEYED MASOUD	
			ART UNIT	PAPER NUMBER
			1791	
			NOTIFICATION DATE	DELIVERY MODE
			06/09/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,328	<b>Applicant(s)</b> REVOL, STEPHANE	
	<b>Examiner</b> SEYED M. MALEKZADEH	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

Claims **1- 15** are **cancelled**.

Claims **16- 35** stand **rejected**.

Claims **16- 30** are currently **amended**.

Claims **31- 35** are newly **added claims**.

In view of the amendment, filed on 02/13/2009, following **new grounds of rejection** are applied:

### ***35 USC § 112, Second Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 16- 35** are rejected under 35 U.S.C. 112, **second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of “**precise** location of the mold” in the **claims 16 and 30** renders the claims indefinite. The term “**precise**” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Does the precise location refer to a predetermined location of the mold? Modification of the claim is requested.

The recitation of “a substantially **small** thickness compared to a surface area of the volume” in the claim 31 renders the claim indefinite. The term “**small**” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The recitations of “the deflector is configured and positioned **such that** the powder is deflected in the form of a layer, and enters a cavity of the mold in the form of a layer” in claim 33 renders the claim indefinite because according to the claim language, the device includes elements which are capable of deflecting the powder in the form of a layer and are not actually disclosed (those encompassed by "such that", thereby rendering the scope of the claim unascertainable. See MPEP § 2173.05(d).

The recitation of “wherein the rotating device is located **immediately** below the means for adding the at least one powder” in claim 35 renders the claim indefinite. The term “**immediately**” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In view of the amendment, filed on 02/13/2009, **following rejections are maintained** for the reason of record as given in the previous office action.

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The bases of these rejections are the same as given in the office action, mailed on 08/13/2008.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 16–18, 26, and 29-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Zahrah et al (US 6,402,500)**

Zahrah et al (US '500) teach a delivery and filling system for filling a mould cavity (124) with a particulate material such as powder wherein the system comprises a mini-hopper (10) and collimator (126) as a means for adding at least one powder including a power inlet and a powder outlet in which the mini-hopper (10) has the same structural functionality as a receptacle, an individualized fluidizer (114) as an introducing pipe with an entrance orifice, a porous distributor plate (104) as a means for ejecting the powder added into a location of the device, and a bowl section positioned above the mold cavity (124) as a deflector in which locally intercept and redirect part of the powder ejected from the ejector means towards the mould cavity (124). (See lines 11-67, column 15 and figures 4A - 4B)

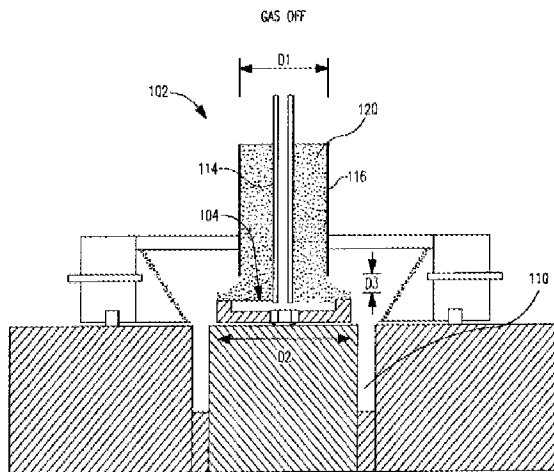


FIG. 4A

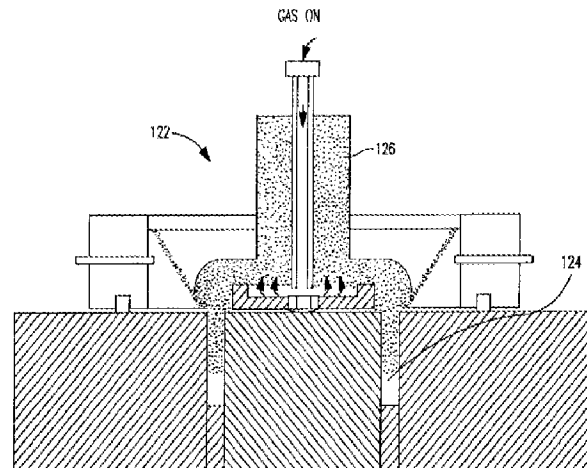


FIG. 4B

Zahrah et al (US '500) further teach the delivery chute (122) is centered above the die cavity (124) by pushing and moving the fill-shoe. (See lines 52-61, column 15) Therefore, the prior art teaches the deflector is mobile and orient-able.

Moreover, Zahrah et al (US '500) disclose the means (126) for adding powder includes a powder inlet and a powder outlet, and further the deflector is a part of an internal wall of the ejecting device.

The prior art, thus, meets all the claim limitations and therefore Zahrah et al (US '500) **anticipate** the claims 16-18, 26, and 29-33.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 19-24 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zahrah et al. (US 6,402,500) in view of Souers et al. (US 5,296,202)**

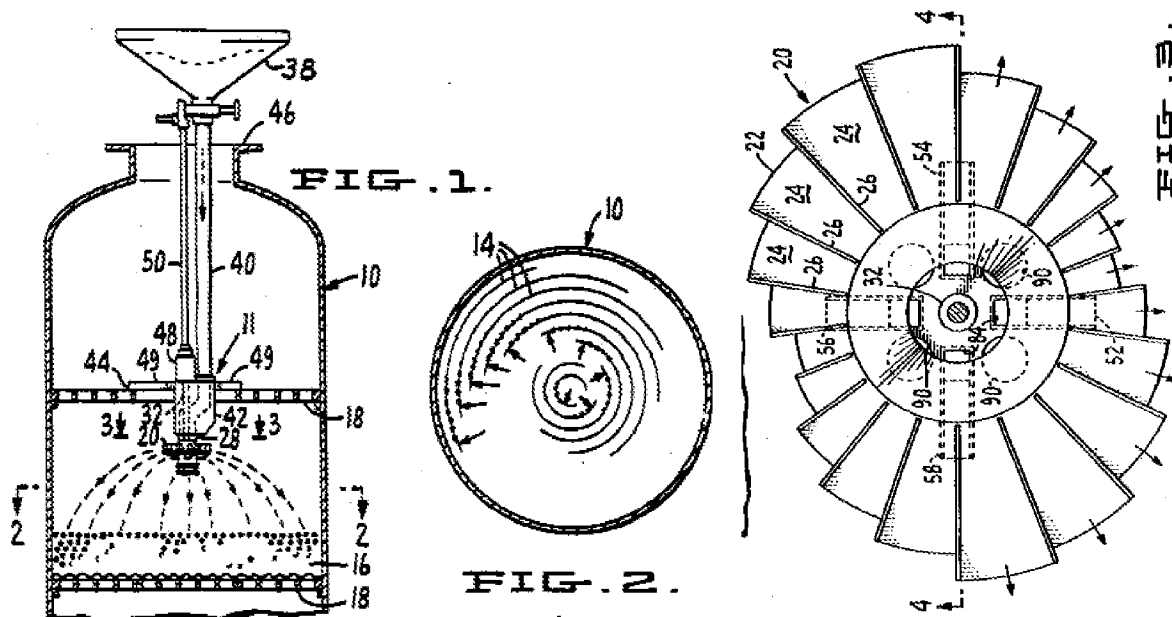
Zahrah et al. ('500) teach all the structural limitations of a device for filling at least one mold with the powder, as discussed above in the rejection of the claims 16-18, 26, and 29-33. Further, as recited above, Zahrah et al. ('500) teach a mean for ejecting the powder includes a tray as a lower part, a collimator (126) as an upper part and an entrance orifice (114) as a powder inlet and a powder outlet, wherein a space is located between the tray as the lower part and the collimator (126), as the upper part. (See figures 4A- 4B and 5B)

**However**, Zahrah et al. ('500) **fail to teach** rotating the ejecting means for ejecting powder as a rotating device which is in a shape of a disk, a cone, or a bowl, and includes at least one rib, as claimed in claims 19- 21 and 23- 24.

**In the analogous art**, Souers et al (US '202) teach an apparatus for simultaneously distributing particles across the full diameter of particles across the full diameter of the bed with a single rotor wherein the apparatus comprises a large diameter catalytic reactor vessel (10), a hopper (38), a supply tube (40), a catalyst loading apparatus (11), a lower feed hopper (42), a feed tube (28), and a catalyst distribution rotor member (20) as a disk-like rotating device in which the disk-like rotating device (20) comprises a plurality of sectors or segments (24) with rib members (26), a drive shaft (32) for the

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rotation of the rotor member (20), (See column 7 and lines 12-50, column 8; further, figures 1 and 3) wherein the particles are distributed by the single disk-like member across the full diameter of the bed with substantially uniformly high density through forming a multiplicity of annular rings of the powder concentric with the center of the vessel or bed. (See lines 62-68, column 4)



**It would have been obvious** for one of ordinary skill in the art at the time of applicant's invention to modify the device for the powder filling of the mold as taught by Zahrah et al (US '500) through **providing** a disk-like rotating device with ribs as an ejection mean for the filling of the mold **in order to** uniformly distribute the powders within the mold cavity in such a way that the powders have a high density, as suggested by Souers et al (US '202)



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**Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zahrah et al. (US 6,402,500) in view of Souers et al. (US 5,296,202), as applied to claims 19- 24 and 34- 35, and further in view of Olson et al. (US 4,437,613)**

Combined teachings of Zahrah et al. (US '500) and Souers et al. ('202) teach all the structural limitations of a device for filling at least one mold with the powder, as discussed above in rejection of claims 19-24 and 34- 35.

**However**, the prior art **fails** to teach the rotating device includes a curved tube, as claimed in claim 25.

**In the analogous art**, Olson et al. (US '613) teach a particle spreading apparatus as a powder spreading apparatus for dispersing particles in which the apparatus includes grain storage bin (18), a grain conveyor (37), a distributing apparatus (10) comprising a rotating shaft (17), a grain holding unit (12), a cylindrically shaped drum (19), and an output tube (26), wherein the particles holding unit may be selectively rotated about the mounting unit by appropriately controlling the motor in order to evenly distribute the particles throughout the particle storage bin. (See lines 60-68, column 2 and lines 1-20, column 3; figures 2-3)

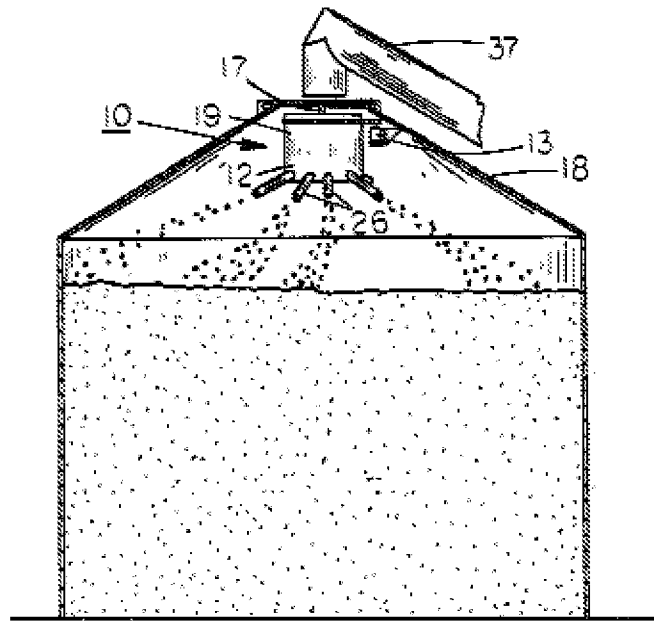


FIG. 2

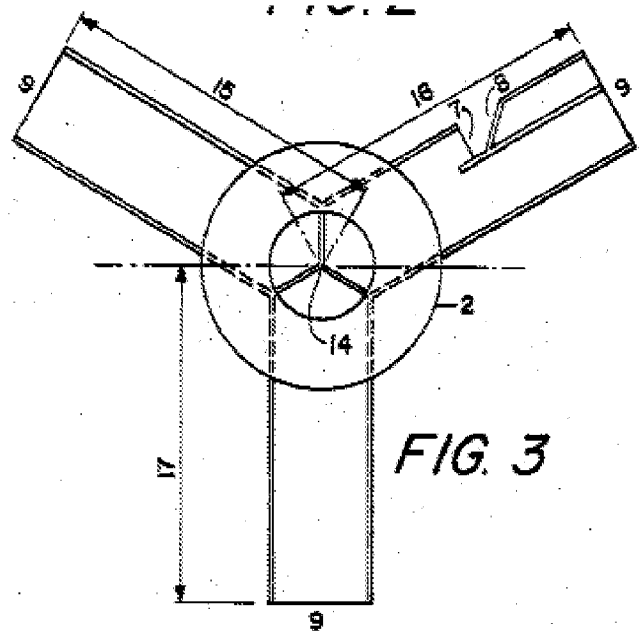
**It would have been obvious** for one of ordinary skill in the art at the time of applicants' invention to modify the device for powder filling of the mold as taught by combined teachings of Zahrah et al. ('500) and Souers et al. ('202) through **providing** a curved tube for the rotating device of the ejection apparatus for distributing the powder within the mould cavity **in order to** effectively control the distribution of the powders through the mold cavity and also to fill the mould cavity with even layers of powder, as suggested Olson et al. (US '613)

**Claims 27- 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zahrah et al. (US 6,402,500) in view of Bottoms (US 3,780,887)**

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Zahrah et al. ('500) teach all the structural limitations of a device for filling at least one mold with the powder, as discussed above in rejection of claims 16 – 18, 26, and 29- 33. **However**, Zahrah et al. ('500) **fail** to teach at least one deflector is placed in parallel with a rotation axis so as to be perpendicular to a median ejection plane of the powder layer, as claimed in claims 27 and 28.

**In the analogous art**, Bottoms (US '887) teach a rotary distributor apparatus (1) with inclined conduits stream dividers and multiple discharge ports comprising a receiving mean (2), an optional dust shield (6), a conventional bearing (5), a fixed support (4), distributing conduits (3), drive means (20) which rotates the receiving mean (2), and dividers (7 and 21) as deflectors, wherein the powder material can be uniformly distributed in a vessel by amount and by particle size radially from the axis of rotation at each level in the vessel, (See lines 15-22, column 1) and, further, the dividers (7 and 21) as deflectors divide a stream of particulate material passing downwardly through the conduit (See lines 39-47, column 1) in which the deflectors (7 and 21) are in parallel with the rotation axis of receiving means (2) and also the deflectors (7 and 21) are in perpendicular position relative to the plane in which the fixed support (4) is positioned. (See figures 1 and 3)



### Examiner's Note

**Claim 23** recites “through which the powder enters and the powder being able to escape through the space between the lower and the upper parts”

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(See lines 3-4), and **claim 24** recites "such that inertia of the powder leaving the outlet is sufficiently high that the powder is projected outside the rotating device" (See lines 2-4); further, **claim 26** recites "quickly moves the at least one receptacle and stops the at least one receptacle suddenly so that the powder contained in the at least one receptacle is sprayed outside the at least one receptacle by inertia" (See lines 3-5). Also, **claim 31** recites "the layer is a volume of the powder with a substantially small thickness compared to a surface area of the volume", and **claim 32** recites "a thickness of the layer is smaller than an opening of a cavity of the mold". Further, **claim 33** recites "wherein the deflector is configured and positioned such that the powder is deflected in the form of a layer, and enters a cavity of the mold in the form of a layer" and **claim 34** recites "the rotating device ejects the powder at a direction between a horizontal and minus 90° of the horizontal".

All the above recitations are directed to the manner of operating the claimed apparatus and the powder material which is used in the claimed device, and the recitations do not further provide any structural limitations for the claimed apparatus. Therefore, the above recitations are directed to the **intended use** of the claimed apparatus.

Intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530.

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The manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself, *In re Casey*, 152 USPQ 235,238.

Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during intended operation are not significant in determining patentability of an apparatus claim, *Ex parte Thibault*, 164 USPQ 666.

A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, *Ex parte Masham*, 2 USPQ2d 1647.

See also *In re Yanush*, 177 USPQ 705 and *In re Casey*, 152 USPQ 235.

### ***Response to Arguments***

Applicant's **arguments** filed on 02/13/2009 have been fully considered but they **are not persuasive**.

**Applicant argues** that Zahrah does not disclose or suggest “at least one means for ejecting the powder added into the device in a form of a layer, and at least one deflector placed above a precise location of the mold, the at least one deflector configured to locally intercept at least part of the powder ejected in the form of a layer and redirect locally intercepted powder towards said precise

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location of the mold,” as recited in amended claim 16. (See remarks, page 8, lines 11- 15)

**Applicant’s argument** was fully considered, but was **not found persuasive** because firstly, as also discussed above in the body of the rejection, it is not clear the term “precise location” is referring to which location of the mold cavity, and secondly, as also recited above, Zahrah et al. (US ‘500) clearly teach a delivery and filling system for filling a cavity (124) with a particulate material wherein the system comprises an individualized fluidizer (114) as an introducing pipe with an entrance orifice, a porous distributor plate (104) as a mean for ejecting the powder added into the device, a bowl section positioned above the mold cavity (124) as a deflector in which is capable to intercept and redirect the powder rejected from the ejector means towards the mould cavity (124) (See Zahrah et al, column 15, lines 11- 67 and figures 4A - 4B); Therefore, Zahrah anticipate the claimed device, as claimed in claim 16.

Furthermore, in response to the **applicant’s argument** that “the device of the Zahrah et al. (US ‘500) not eject the powder in the form of a layer”, applicant’s argument was fully considered but **was not found persuasive** because firstly, applicant’s attention is drawn to the point that the above argument is not directed to the claimed apparatus but it is directed to the material which was used in the claimed apparatus; as recited above, in procedure of examining an apparatus, no patentable weight is given to the manner of using the apparatus, and secondly, Zahrah et al. (US ‘500) clearly

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teaches “an inlet port is provided for receiving a compressed gas in the second partition at a low pressure, whereby only a layer of particulate material next to the porous distributor plates becomes fluidized by migration of the compressed gas through the porous distributor plates and into the first partition.” (See Zahrah et al - column 8, lines 33- 38) and further in view of figure 5B, it is clear that "the powder is ejected in the form of a layer".

Also, in response to the **applicant's argument** that “applicant respectfully traverses the obviousness rejection based on Zahra in view of Souers because there is no apparent reason to modify the apparatus of Zahra by incorporating the rotating device of Souers”, applicant’s argument was fully considered but **was not found persuasive** because applicant’s attention is drawn to the point that as recited above Souers provide a strong motivation for the combination of Zahra in view of Souers; further, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)

Therefore, rejections of claims 16- 35 are maintained.



***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Masoud Malekzadeh whose telephone number is 571-272-6215. The examiner can normally be reached on Monday – Friday at 8:30 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin, can be reached on (571) 272-1189. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information

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for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SEYED M. MALEKZADEH/

Examiner, Art Unit 1791

/Eric Hug/

Primary Examiner, Art Unit 1791